

523, 108
Rec'd PCT/PTO 03 FEB 2005

(12)特許協力条約に基づいて公開された国際出願

(19) 世界知的所有權機關
國際事務局



(43) 國際公開日
2005年1月13日 (13.01.2005)

PCT

(10) 国際公開番号
WO 2005/004282 A1

(51) 國際特許分類⁷: H01Q 5/01, 1/2

代田区 丸の内二丁目 2番 3号 三菱電機株式会社内
Tokyo (JP).

(21) 国際出願番号: PCT/JP2003/008543

(74) 代理人: 宮田 金雄, 外(MIYATA, Kaneo et al.); 〒100-8310 東京都千代田区丸の内二丁目2番3号 三菱電機株式会社内 Tokyo (JP).

(22) 國際出願日: 2003年7月4日 (04.07.2003)

菱電機株式会社内 Tokyo (JP).

(25) 国際出願の言語: 日本語

(81) 指定国(国内): CN, JP, KR, US.

(26) 国際公開の言語: 日本語

(84) 指定国(仮域): ヨーロッパ特許(AI, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR).

(71) 出願人(米国を除く全ての指定国について): 三菱電機株式会社(MITSUBISHI DENKI KABUSHIKI KAISHA) [JP/JP]; 〒100-8310 東京都千代田区丸の内二丁目2番3号 Tokyo (JP).

添付公開書類：
一 國際調查報告書

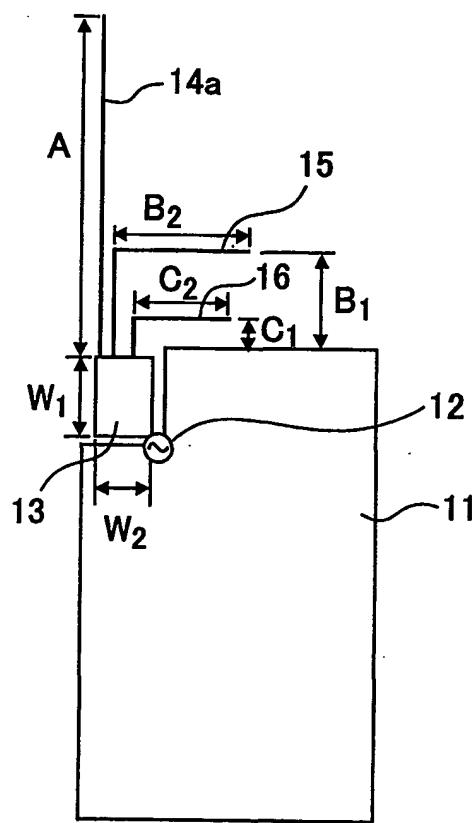
(72) 発明者; および

(75) 発明者/出願人(米国についてのみ): 早乙女秀之
(SOUTOME, Hideyuki) [JP/JP]; 〒100-8310 東京都千

2 文字コード及び他の略語については、定期発行される各PCT gazetteの巻頭に掲載されている「コードと略語のガイダンスノート」を参照。

(54) Title: ANTENNA ELEMENT AND MOBILE TELEPHONE DEVICE

(54) 発明の名称: アンテナ素子および携帯電話機



(57) Abstract: A plurality of mono-pole antennas and linear antennas respectively having a predetermined electric length are connected to a plate-shaped antenna in series with respect to a power supply point via which the plate-shaped antenna is connected to a ground substrate. Thus, each antenna has one power supply point and it is possible to obtain an antenna element having a wide band performance and a plural resonance performance.

(57) 要約: 一の給電点を介してグランド基板と接続された板状アンテナに、それぞれ所定の電気的長さを持ったモノポールアンテナおよび線状アンテナ複数を給電点に対して直列に接続することで各アンテナの給電点を一つとし、これにより広帯域性能、複数共振性能を持ったアンテナ素子を得るものである。

VO 2005/004282 A1

INTERNATIONAL SEARCH REPORT

International application No.
PCT/JP03/08543

A. CLASSIFICATION OF SUBJECT MATTER
Int.Cl⁷ H01Q5/01, 1/24

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
Int.Cl⁷ H01Q5/01, 1/24

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
Jitsuyo Shinan Koho 1922-1996 Toroku Jitsuyo Shinan Koho 1994-2003
Kokai Jitsuyo Shinan Koho 1971-2003 Jitsuyo Shinan Toroku Koho 1996-2003

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WO 01/80367 A1 (Mitsubishi Electric Corp.), 25 October, 2001 (25.10.01), Full text; all drawings & EP 1280233 A1	1-8
Y	JP 2002-171126 A (Mitsubishi Electric Corp.), 14 June, 2002 (14.06.02), Full text; all drawings (Family: none)	1-8
Y	JP 2003-8319 A (Samsung Electronics Co., Ltd.), 10 January, 2003 (10.01.03), Full text; all drawings (Family: none)	1-8

Further documents are listed in the continuation of Box C.

See patent family annex.

"A"	Special categories of cited documents: document defining the general state of the art which is not considered to be of particular relevance	"T"	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"E"	earlier document but published on or after the international filing date	"X"	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"L"	document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y"	document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"O"	document referring to an oral disclosure, use, exhibition or other means	"&"	document member of the same patent family
"P"	document published prior to the international filing date but later than the priority date claimed		

Date of the actual completion of the international search
07 October, 2003 (07.10.03)

Date of mailing of the international search report
21 October, 2003 (21.10.03)

Name and mailing address of the ISA/
Japanese Patent Office

Authorized officer

Facsimile No.

Telephone No.

Form PCT/ISA/210 (second sheet) (July 1998)

BEST AVAILABLE COPY

INTERNATIONAL SEARCH REPORT

International application No.
PCT/JP03/08543

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 02/13312 A1 (Matsushita Electric Industrial Co., Ltd.), 14 February, 2002 (14.02.02), Full text; all drawings & EP 1306923 A1	1-8
A	JP 2003-87043 A (Toshiba Corp.), 20 March, 2003 (20.03.03), Full text; all drawings (Family: none)	1-8
A	JP 62-34407 A (Fujitsu Ltd.), 14 February, 1987 (14.02.87), Full text; all drawings (Family: none)	1-8

Form PCT/ISA/210 (continuation of second sheet) (July 1998)

BEST AVAILABLE COPY